

REMARKS

Claim 1 has been amended to incorporate the requirements of claims 5 and 15 and to further specify that the carrier for the alkaline dye composition comprises water. See the specification at page 19, lines 10 to 16. Claim 9 has been similarly amended. Additionally, claim 1 has been amended to specify that the hair is contacted with the colorant composition for a period of about 5 seconds to about 5 minutes. Support for same is provided at page 7, lines 1 to 5 of the specification. Claims 5, 13, 15 and 17 are hereby cancelled without prejudice. New claim 19 and amended claim 9 specify that the alkaline dye composition has a pH of between about 9.7 and 10.1. See page 26, line 7. New claim 20 describes the alkaline dye composition as further comprising an alkalizing agent consisting essentially of a metal hydroxide. See page 15, lines 14 to 20. In view of the remarks that follow, reconsideration and allowance of the subject claims, as hereby amended, is respectfully requested.

In the Office Action dated December 20, 2005, claims 1, 4 and 15-16 of the subject application were rejected under 35 U.S.C. §103(a) as unpatentable over Nomura et al. (EP 0148466) in view of Lapidus et al. (U.S. 4,104,021); claims 2 and 3 were rejected under 35 U.S.C. §103(a) as unpatentable over Nomura et al. in view of Lapidus et al. and further in view of Schwartzkopf (FR 1070766). Regarding claims 5, 6, 7, 8, 9-14 and 17-18, the Action maintains that the additional requirements thereof are obvious modifications and/or would be expected to have similar properties and results to those claimed, absent unexpected results.

Pursuant to the subject invention, it was found that in hair colorant compositions formed by the mixture of alkaline dye and oxidizing components, the incorporation of a relatively high level of chelant in combination with a water soluble ammonium carbonate or carbamate salt, provides compositions that provide a means of substantially avoiding hair damage, such that the compositions can be used on a regular basis in forms such as, for example, daily shampoos or conditioners to attain and maintain a desired degree of permanent hair coloration. The subject compositions enable users to achieve

gradual hair coloration over a period of time by means of relatively short duration treatments. See amended claim 1 specifying a contact period of about 5 seconds to about 5 minutes.

Further, the subject compositions are able to achieve the above described benefits in a system that need not include added aqueous ammonia. See new claim 20 specifying that the alkaline dye composition further comprises an alkalizing agent consisting essentially of a metal hydroxide. Aqueous ammonia is an ingredient commonly added into many 2-part hair dyeing systems to activate the bleaching component (e.g., peroxide), of the oxidizing agent. Aqueous ammonia, can, however, impart an unpleasant and irritating odour, a particularly undesirable feature for compositions intended for regular and repeated use.

Nomura et al. describes what is therein termed a "bi-liquid oxidation type hair dye composition" consisting of a color lotion and oxidizer. The color lotion comprises ammonia as an alkali agent and a water soluble ammonium salt, which salt may, but need not, be a carbonate. Its coloring compositions are prepared from color lotions that contain, among other ingredients, an ammonium salt that may, but need not, be a carbonate or a bicarbonate salt; indeed, the preferred salts of Nomura et al are ammonium chloride and ammonium nitrate. In Example 2, the citation describes dye compositions prepared from 1:1 mixtures of color lotion and oxidizers. Among other ingredients, color lotion Q contains 3% of ammonium bicarbonate and 2% sodium edetate, and color lotion O contains 3% ammonium carbonate and 2% sodium edetate. Aqueous ammonia is used to adjust color lotions O and Q to a pH of 9 (a relatively low pH compared to the pH of between about 9.7 and 10.1 required by amended claims 9 and 19). Based on the reported 1:1 mixture, the resulting dye compositions contain 1.5% of a carbonate salt and 1% of chelant. The dye compositions disclosed by Example 2 are used to treat hair using a procedure wherein the composition is allowed to remain on the hair for a period of 30 minutes.

There is nothing in Nomura et al. that discloses or suggests that the combination of relatively high levels of an ammonium carbonate salt and chelant can provide colorant compositions that provide a means of substantially avoiding hair damage and

that enable users to achieve gradual hair coloration over time using the relatively short duration treatments described by amended claim 1. Further, in contrast to new claim 20 which describes the alkaline dye composition as further comprising an alkalizing agent consisting essentially of a metal hydroxide, Nomura et al. specifically focuses on the use of added aqueous ammonia as an alkalizing agent:

...an object of this invention is to provide a bi-liquid oxidation type hair dye composition in which is contained ammonia as an alkali agent, and a water-soluble salt. (See Nomura et al. at page 4, "SUMMARY OF THE INVENTION".)

Schwartzkopf discloses liquid, paste, solid or "more or less soapy" hair dye products which, in liquid form are characterized as giving rise to carbonic acid ions, phosphoric acid ions, and ammonium ions. See the translation of Schwartzkopf that accompanies this Amendment, at the last paragraph of page 2. Examples 1 and 3 lack chelant. Example 2 of discloses a coloring composition made from a mixture from 40 parts of a dye in paste form and 20 parts of 33% hydrogen peroxide, wherein the dye paste is made by adding to 100 parts of a base product in paste form: 1.0 parts toluene diamine, 0.5 parts resorcinol, 1.0 parts ethylene diamine tetraacetate (iron content about 0.15 part), 0.75 parts sodium carbonate, 1.0 parts sodium diphosphate, and ammonia to adjust the pH to about 10. In Example 2, it is doubtful whether the iron-containing ethylene diamine tetraacetate, could be considered to be a chelant. Like Nomura et al., Schwartzkopf also fails to disclose the short contact period required by claim 1.

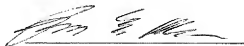
Lapidus et al, the secondary reference cited as disclosing the use of the colorants therein described to effect a "gradual" increase in depth of shade, does not disclose the combination of a water soluble carbonate salt together with relatively high levels chelant, or the benefits provided by such systems. More specifically, Lapidus et al. discloses a process wherein the quantity of oxidant in the first application is 0.5 to 2 times the amount required to oxidize the primary aromatic amines and aminophenols in the colorant solution, and wherein successive applications utilize increased quantities of oxidant above the initial application, ranging up to 10 times the amount required for oxidation. Lapidus et al. does not suggest that the benefits therein disclosed could be achieved in the absence of the oxidant levels therein disclosed. Given the specificity of

the process, there is nothing that would suggest selectively abstracting the gradual treatment aspect of the citation and combining it with Nomura et al. or Schwartkopf. It is respectfully submitted that such a combination is mere hindsight suggested only by this invention.

In light of the above amendments and remarks, it is respectfully requested that the application be allowed to issue.

If a telephone conversation would be of assistance in advancing the prosecution of the present application, applicants' undersigned attorney invites the Examiner to telephone at the number provided.

Respectfully submitted,



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